CLAIMS

I Claim:

1. A DVI connector for receiving and transmitting DVI signals and IEEE 1394 signals over a DVI cable comprising:

   a. means for receiving and transmitting the DVI signals configured for coupling to the DVI cable for transmitting and receiving the DVI signals; and

   b. means for receiving and transmitting the IEEE 1394 signals configured for coupling to the DVI cable for transmitting and receiving the IEEE 1394 signals.

2. The DVI connector as claimed in claim 1 wherein the means for receiving and transmitting the DVI signals includes a plurality of digital pins corresponding to a first link.

3. The DVI connector as claimed in claim 2 wherein the plurality of digital pins includes twenty-four pins.

4. The DVI connector as claimed in claim 1 wherein the means for receiving and transmitting the IEEE 1394 signals includes a plurality of digital pins corresponding to a second link.

5. The DVI connector as claimed in claim 4 wherein the plurality of digital pins includes four pins and carries two differential signal pairs.

6. The DVI connector as claimed in claim 4 wherein the plurality of digital pins communicate digital signals substantially according to the IEEE 1394 standard.

7. The DVI connector as claimed in claim 1 wherein the means for receiving and transmitting the DVI signals is further configured for coupling to a selective one of a DVI transmitter circuit and a DVI receiver circuit for transmitting and receiving the DVI signals.

8. The DVI connector as claimed in claim 7 wherein the DVI signals from the DVI transmitter circuit are transmitted over the DVI cable to a receiving device.

9. The DVI connector as claimed in claim 7 wherein the DVI signals received from the DVI cable are provided to the DVI receiver circuit.

10. The DVI connector as claimed in claim 1 wherein DVI data transmitted using the DVI signals and IEEE 1394 data transmitted using the IEEE 1394 signals are synchronized for output at a receiving device.

11. The DVI connector as claimed in claim 1 wherein the means for receiving and transmitting the IEEE 1394 signals is further configured for coupling to an IEEE 1394 interface circuit.

12. The DVI connector as claimed in claim 1 further comprising the DVI cable coupled to the means for receiving and transmitting the DVI signals and to the means for receiving and transmitting the IEEE 1394 signals.

13. The DVI connector as claimed in claim 1 wherein the IEEE 1394 signals include isochronous and asynchronous data.

14. A DVI connector configured to receive and transmit DVI signals and IEEE 1394 signals over a DVI cable comprising:

a. a first plurality of pins configured to couple to the DVI cable to transmit and receive the DVI signals; and

b. a second plurality of pins configured to couple to the DVI cable to transmit and receive the IEEE 1394 signals.

15. The DVI connector as claimed in claim 14 wherein the first plurality of pins are further configured to couple to a selective one of a DVI transmitter circuit and a DVI receiver circuit to transmit and receive the DVI signals.

16. The DVI connector as claimed in claim 15 wherein the DVI signals from the DVI transmitter circuit are transmitted over the DVI cable to a receiving device.

17. The DVI connector as claimed in claim 15 wherein the DVI signals received from the DVI cable are provided to the DVI receiver circuit.

18. The DVI connector as claimed in claim 14 wherein DVI data transmitted using the DVI signals and IEEE 1394 data transmitted using the IEEE 1394 signals are synchronized for output at a receiving device.

19. The DVI connector as claimed in claim 14 wherein the second plurality of pins are further configured to couple to an IEEE 1394 interface circuit.

20. The DVI connector as claimed in claim 14 further comprising the DVI cable coupled to the first plurality of pins and to the second plurality of pins.

21. The DVI connector as claimed in claim 14 wherein the second plurality of pins communicate digital signals substantially according to the IEEE 1394 standard.

22. The DVI connector as claimed in claim 14 wherein the IEEE 1394 signals include isochronous and asynchronous data.

23. A DVI connector for receiving and transmitting IEEE 1394 signals over a DVI cable comprising a plurality of pins configured for coupling to the DVI cable for transmitting and receiving the IEEE 1394 signals, wherein the plurality of pins are further configured for coupling to an IEEE 1394 interface circuit.

24. The DVI connector as claimed in claim 23 wherein the plurality of pins are digital pins within a DVI connector.

25. The DVI connector as claimed in claim 24 wherein the plurality of digital pins communicate digital signals substantially according to the IEEE 1394 standard.

26. The DVI connector as claimed in claim 23 further comprising the DVI cable coupled to the plurality of pins.

27. The DVI connector as claimed in claim 23 wherein the plurality of pins includes four pins and carries two differential signal pairs.

28. A method of receiving and transmitting DVI signals and IEEE 1394 signals over a DVI cable comprising:

a. communicating the DVI signals over the DVI cable; and

b. communicating the IEEE 1394 signals over the DVI cable.

29. The method as claimed in claim 28 wherein the DVI signals are communicated over a plurality of digital pins in a connector and a plurality of digital signal lines within the DVI cable.

30. The method as claimed in claim 28 wherein the IEEE 1394 signals are communicated over a plurality of digital pins in a connector and a plurality of digital signal lines within the DVI cable.

31. The method as claimed in claim 30 wherein the plurality of digital pins communicate digital signals substantially according to the IEEE 1394 standard.

32. The method as claimed in claim 28 further comprising synchronizing DVI data transmitted using the DVI signals and IEEE 1394 data transmitted using the IEEE 1394 signals for output at a receiving device.

33. A communication device for transmitting and receiving signals with other devices including a DVI connector for receiving and transmitting DVI signals and IEEE 1394 signals over a DVI cable, the DVI connector comprising:

a. a first plurality of pins configured for coupling to the DVI cable for transmitting and receiving the DVI signals; and

b. a second plurality of pins configured for coupling to the DVI cable for transmitting and receiving the IEEE 1394 signals.

34. The communication device as claimed in claim 33 wherein the first plurality of pins are further configured for coupling to a selective one of a DVI transmitter circuit and a DVI receiver circuit for transmitting and receiving the DVI signals.

35. The communication device as claimed in claim 34 wherein the DVI signals from the DVI transmitter circuit are transmitted over the DVI cable to a receiving device.

36. The communication device as claimed in claim 34 wherein the DVI signals received from the DVI cable are provided to the DVI receiver circuit.

37. The communication device as claimed in claim 33 wherein DVI data transmitted using the DVI signals and IEEE 1394 data transmitted using the IEEE 1394 signals are synchronized for output at a receiving device.

38. The communication device as claimed in claim 33 wherein the second plurality of pins are further configured for coupling to an IEEE 1394 interface circuit.

39. The communication device as claimed in claim 33 further comprising the DVI cable coupled to the first plurality of pins and to the second plurality of pins.

40. The communication device as claimed in claim 33 wherein the second plurality of pins communicate digital signals substantially according to the IEEE 1394 standard.

41. A network of devices comprising:

a. a DVI cable including digital signal lines with a first plurality of the digital signal lines corresponding to a first link and a second plurality of the digital signal lines corresponding to a second link;

b. a source device including:

i. a DVI transmitter circuit configured for transmitting DVI signals;

ii. a first IEEE 1394 interface circuit for communicating IEEE 1394 signals; and

iii. a first DVI connector coupled to the DVI cable for transmitting the DVI signals and transmitting and receiving the IEEE 1394 signals, the first DVI connector including:

A. a first plurality of digital pins coupled to the first plurality of digital signal lines of the DVI cable and to the DVI transmitter circuit for transmitting the DVI signals; and

B. a second plurality of digital pins coupled to the second plurality of digital signal lines of the DVI cable and to the first IEEE 1394 interface circuit for transmitting and receiving the IEEE 1394 signals; and

c. a receiving device including:

i. a DVI receiver circuit configured for receiving the DVI signals;

ii. a second IEEE 1394 interface circuit for communicating the IEEE 1394 signals; and

iii. a second DVI connector coupled to the DVI cable for receiving DVI signals and transmitting and receiving the IEEE 1394 signals, the second DVI connector including:

A. a third plurality of digital pins coupled to the first plurality of digital signal lines of the DVI cable and to the DVI receiver circuit for receiving the DVI signals; and

B. a fourth plurality of digital pins coupled to the second plurality of digital signal lines of the DVI cable and to the second IEEE 1394 interface circuit for transmitting and receiving the IEEE 1394 signals.

42. The network of devices as claimed in claim 41 wherein DVI data transmitted using the DVI signals and IEEE 1394 data transmitted using the IEEE 1394 signals are synchronized for output at the receiving device.